MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville Modified Bitumen Roofing Systems over Recover Deck.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 13-0129.21 and consists of pages 1 through 51.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials:	SBS
Deck Type:	Recover
Maximum Design Pressure:	See Specific Deck Type

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
DynaBase	39-3/8" x 49'2"	ASTM D6163 Type I Grade S	A glass reinforced SBS modified bitumen base sheet.
DynaBase PR	39-3/8" x 49'2"	ASTM D6164 Type I Grade S	A polyester reinforced SBS modified bitumen base sheet.
DynaWeld Base	39-3/8" x 32'10"	ASTM D6163 Type I Grade S	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaBase HW	39-3/8" x 49'2"	ASTM D6163 Type 1 Grade S	A glass reinforced SBS modified bitumen base sheet for heat welded applications.
DynaFast 180 S	39-3/8" x 49'2"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaFast 180 HW	39-3/8" x 49'2"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaFast 250 HW	39-3/8" x 32'10"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaGlas	39-3/8" x 32'-10".	ASTM D6163 Type I Grade G	A glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaWeld Cap FR	39-3/8" x 32'10"	ASTM D6163 Type I Grade G	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 180 FR	39-3/8" x 32'10"	ASTM D6164 Type I Grade G	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR	39-3/8" x 32'10"	ASTM D6164 Type II Grade G	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld Cap 250 FR CR	39-3/8" x 32'10"	ASTM D6164 Type II Grade G	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating for use in heat weld applications.
DynaWeld Cap 250	39-3/8" x 32'10"	ASTM D6164 Type II Grade G	A polyester reinforced SBS modified bitumen membrane surfaced with granules for use in heat weld applications.
DynaWeld 250 S	39-3/8" x 32'10"	ASTM D6164 Type II Grade S	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.

Product	Dimensions	Test Specification	Product Description
DynaGlas 30 FR	39-3/8” x 32’10”	ASTM D6163 Type I Grade G	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaGlas FR	39-3/8” x 32’10”	ASTM D6163 Type I Grade G	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
DynaKap T1	39-3/8” x 32’10”	ASTM D6162 Type I Grade G	A composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaKap FR T1	39-3/8” x 32’10”	ASTM D6162 Type I Grade G	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180	39-3/8” x 32’10”	ASTM D6164 Type I Grade G	A polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 FR	39-3/8” x 32’10”	ASTM D6164 Type I Grade S	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 180 S	39-3/8” x 32’10”	ASTM D6164 Type I Grade S	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaWeld 180 S	39-3/8” x 32’10”	ASTM D6162 Type I Grade S	A polyester reinforced SBS modified bitumen base or inner ply sheet for use in heat weld applications.
DynaPly T1	39-3/8” x 32’10”	ASTM D6162 Type II Grade S	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaLastic 250 FR	39-3/8” x 32’10”	ASTM D6164 Type II Grade G	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules.
DynaLastic 250 FR CR	39-3/8” x 32’10”	ASTM D6164 Type II Grade G	A fire resistant, polyester reinforced SBS modified bitumen membrane surfaced with granules and a reflective white coating.
DynaLastic 250 S	39-3/8” x 32’10”	ASTM D6164 Type II Grade S	A polyester reinforced SBS modified bitumen base or inner ply sheet.
DynaMax FR	39-3/8” x 32’10”	ASTM D6162 Type III Grade G	A fire resistant, composite reinforced SBS modified bitumen membrane surfaced with granules.
DynaMax S	39-3/8” x 32’10”	ASTM D6162 Type III Grade S	A composite reinforced SBS modified bitumen base or inner ply sheet.
DynaClad	39-3/8” x 33’10”	ASTM D6298	A glass reinforced base sheet SBS modified bitumen membrane surfaced with foil.
DynaBase XT	39-3/8” x 49’2”	ASTM D6163 Type I Grade S	A glass reinforced SBS modified bitumen base or inner ply sheet.
DynaGlas FR XT	39-3/8” x 32’10” .	ASTM D6163 Type I Grade S	A fire resistant, glass reinforced SBS modified bitumen membrane surfaced with granules.
GlasKap	36” x 36’	ASTM D3909	A mineral surfaced, asphalt coated, fiberglass cap sheet.
GlasKap CR	36” x 36’	ASTM D3909	A white mineral surfaced, white acrylic coated, fiberglass cap sheet.

Product	Dimensions	Test Specification	Product Description
Ventsulation Felt	36” x 36’	ASTM D4897 Type II	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in asphaltic coating.
GlasBase Plus	36” x 108’	ASTM D4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasPly IV	36” x 180’	ASTM D2178 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly Premier	36” x 180’	ASTM D2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
PermaPly 28	36” x 106’	ASTM D4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
FesCant Plus Cant Strips, and Taper Edge	various	ASTM C728	Factory pre-fabricated cant strips and taper edge, manufactured from expanded perlite insulation.
MBR Flashing Cement Base and Activator	N/A	Proprietary	A two component elastomeric, cold application adhesive, consisting of a modified proprietary compound with an asphalt base.
MBR Bonding Adhesive	N/A	Proprietary	A two component urethane cold application adhesive.
MBR Cold Application Adhesive	5, 55, and 350 gal,	ASTM D3019 Type III	One part, elastomeric cold application adhesive
MBR Low VOC Membrane Adhesive	5 gal	Proprietary	One part, asphalt modified urethane adhesive
MBR RA Membrane Adhesive	1.5L Cartridge	Proprietary	Two part, cold process membrane adhesive
JM Urethane Insulation Adhesive	N/A	Proprietary	Urethane insulation adhesive.
JM Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive
Bestile Industrial Roof Cement	various	ASTM D4586, type I	A trowel grade, cutback bitumen flashing grade cement mixture including inorganic fibers and mineral stabilizers.

Product	Dimensions	Test Specification	Product Description
Flex-I-Drain	various	BOCA 76-61 SBCCI 89204 UBC 3236	Two piece flexible drain system composed of a Noryl deck flange, a flexible neoprene bellows and no hub connection. Available in various sizes and styles for most retro-fit applications.
PC/PET RetroDrain	various	N/A	Engineered resin copolymer fabricated drain for retrofit applications.
USII RetroDrain	various	N/A	One piece, aluminum fabricated drain for retrofit applications.
SuperDome RetroDrain	various	N/A	Cast aluminum, heavy-duty drain for retrofit applications.
FP-10 Vents	10” deck flange, base diameter of 4” and a height of 6”	N/A	One-way roof vent, designed for use in various roof systems, for the release of pressure created by gases or moisture vapor trapped within the roofing system.
Expand-O-Guard	various	N/A	Elastomeric expansion joint cover for vertical expansion and seismic joints. Manufactured from non-reinforced, form-supported elastomeric bellows with a bifurcated waterproof attachment to metal flanges.
Expand-O-Flash	various	N/A	Expansion joint covers manufactured from non-reinforced, form-supported elastomeric bellows with a bifurcated waterproof attachment to metal flanges.
Presto-Lok Fascia and Flashing System	various	TAS 114	A multi-piece fascia and flashing system for built-up and modified bitumen roofing systems manufactured from aluminum or steel.
DynaTred & DynaTred Plus Roof Walkway	various	N/A	Preformed, skid-resistant boards.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI	Polyisocyanurate Insulation.	Johns Manville
ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI	Isocyanurate Insulation with glass reinforced facers	Johns Manville
ENRGY 3 FR	Isocyanurate Insulation with inorganic coated glass reinforced facers; bottom face is premium coated for combustible decks.	Johns Manville
Fesco Foam, DuraFoam	Polyisocyanurate Insulation with perlite facer	Johns Manville
Retro-Fit Board, DuraBoard	High-density perlite roof insulation.	Johns Manville
Fesco Board	Rigid perlite roof insulation board.	Johns Manville
Invinsa Roof Board	High density polyisocyanurate board	Johns Manville
DensDeck, DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum, LLC
JM SECUROCK Gypsum-Fiber Roof Board	Rigid, gypsum-based board stock	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	UltraFast Fastener	Insulation fastener for wood and steel or Concrete.	#12 x 8" Max. Length, #3 Phillips head	Johns Manville
2.	UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate	Galvalume AZ55 steel plate	3" round & 3" square	Johns Manville
3.	UltraFast Plastic Plate	High Density Polyolefin round plate.	3" round	Johns Manville
4.	Lightweight Concrete (LWC) CR Base Fastener	Galvanized double spreading leg fastener for securing base sheets to lightweight insulating concrete.	1.2" or 1.7" leg length; 2.7" dia. Plate	Johns Manville
5.	High Load Fasteners	Insulation and membrane fastener for steel, wood or concrete.	#15 x 14" Max. Length #3 Phillips head	Johns Manville
6.	JM Structural Concrete Fasteners	Insulation fastener for concrete decks.	Various	Johns Manville
7.	High Load Plate	Steel Seam plate with reinforcing ribs and eyehooks	2-3/8" round	Johns Manville
8.	High Load LH	#15 Large Head fastener for steel, wood, or concrete.	#15 x 14" max. #3 Phillips head	Johns Manville
9.	Polymer Membrane Batten	Membrane anchors plastic strips.	1" x250' coil	Johns Manville
10.	APB Plates	2" round steel membrane plates	2" round	Johns Manville
11.	All Purpose Fastener	Insulation fastener	#14 x 16" Max. Length; #3 Phillips head	Johns Manville
12.	Deep Well Batten Bar	Galvalume coated steel membrane batten.	1" x 100' coil	Altenloh, Brink & Co. U.S., Inc.
13.	Twin Loc-Nail	Base sheet fastener *with and without* integrated Plate.	2.7" dia. Plate	Altenloh, Brink & Co. U.S., Inc.
14.	Straight Line Batten Bar	Oval pre-punched metal batten bar.	1" x100' coil	Altenloh, Brink & Co. U.S., Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research	3001482	FM 4470	08/11/98
	3001629	FM 4470	09/10/98
	0Z8A9.AM	FM 4470	09/10/98
	3D4A4.AM	FM 4470	09/28/98
	3000949	FM 4470	06/05/98
	3002823	FM 4470	04/01/99
	3003468	FM 4450	02/02/00
	3006346	FM 4450	08/15/00
	3012974	FM 4450	06/03/02
	3011248	FM 4470	11/01/02
	3009499	FM 4470	04/04/01
	3001457	FM 4470	03/04/02
	3014090	FM 4470	09/05/02
	3020600	FM 4470	01/21/05
	3026130	FM 4470	04/26/06
	3026151	FM 4470	08/15/06
	3026728	FM 4470	11/22/06
	3037222	FM 4470	10/02/09
	3037540	FM 4470	10/20/10
	3043824	FM 4470	06/28/06
	3026728	FM 4470	11/22/06
	3026130	FM 4470	04/26/09
Dynatech Engineering, Inc.	4360.03.95-1	TAS 114	03/95
	4360.03.95-2	TAS 114	03/95
	4361.5.95-1	TAS 114	05/95
Underwriters Laboratories, Inc.	R10167	UL 790	05/27/13
Exterior Research & Design, LLC	#4361-2.04.97-1	TAS 114	04/28/97
	#4361-2.04. -1	TAS 114	04/00/97
	#10390A-10.97-1	TAS 114	10/00/97
	#10390A-12.97-1		12/00/97
	#10391.01.03	TAS 114	01/29/03
	02843.02.05-10	TAS 114	02/10/05
	00257.03.05-1	ASTM D6162/D6163 ASTM D6164/D6298	03/17/05
Trinity|ERD	02843.02.07	TAS 114	02/07/07
	J6990.12.07-R1	ASTM D6162/D6164	03/24/10
	J7670.06.08	ASTM D3909	06/16/08
	J13700.05.10-1-R1	ASTM D5147/D6163	01/25/11
	J13700.05.10-2	ASTM D5147/D6164	05/11/10
	J17040.11.09-R1	ASTM D6164	03/11/10
	J45020.07.13	FM 4474 (D)/TAS 114 (J)	07/12/13

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Name	Report	Date
Independent Roof Testing & Consultants of South Florida	IRT 9900(1-16)	TAS 114	01/20/99 02/10/99
IRT-Arcon, Inc.	02-011 02-026	TAS 114	02/07/02 07/26/02
Atlantic & Caribbean Roof Consulting, LLC.	ACRC 06-003	TAS 114	03/27/06
PRI Construction Materials Technologies, LLC	JMC-066-02-01	ASTM D6163	06/04/12
	JMC-065-02-01	ASTM D6163	05/29/12
	JMC-070-02-01	ASTM D2178 Type IV	04/17/12
	JMC-071-02-01	ASTM D2178 Type VI	04/17/12
	JMC-072-02-01	ASTM D4601 Type II	06/14/12
	JMC-074-02-01	ASTM D4897 Type II	04/17/12
	JMC-075-02-04.2	ASTM D5147/D6164 Type II	12/27/13
	JMC-078-02-01	ASTM D5147/D6298	07/17/12
	JMC-081-02-01.02	TAS 117 B & C	06/11/12
	JMC-091-02-01	ASTM D4601 Type I	06/04/12
	JMC-093-02-01	ASTM D4601 Type II	08/02/12
	JMC-106-02-01	ASTM D6164	04/15/13
	JMC-107-02-01 Rev 6	ASTM D903/D1876/D5147 TAS 117(B)/TAS 117(A) TAS 114(C)	08/14/15
	JMC-108-02-01	FM 4474 (D)/TAS 114 (J)	04/16/13
	JMC-109-02-01 Rev 2	FM 4474 (D)/TAS 114 (J)	11/11/13
	JMC-113-02-01	ASTM D 6164	04/19/13
	JMC-114-02-01	FM 4474 (D)/TAS 114 (J)	05/13/13
	JMC-118-02-02	FM 4474 (C)/TAS 114 (C)	04/16/13
	JMC-131-02-01	FM 4474 (B)/TAS 114 (D)	04/17/13
	JMC-132-02-01	FM 4474 (B)/TAS 114 (D)	04/17/13
	JMC-141-02-01	FM 4474 (D)/TAS 114 (J)	04/18/13
	JMC-168-02-01	FM 4474 (D)/TAS 114 (J)	08/20/13
	JMC-171-02-01	ASTM D6163	01/10/14
	JMC-171-02-02	ASTM D6163	01/10/14
	JMC-171-02-10	ASTM D6162	01/10/14
	JMC-171-02-03	ASTM D6164	01/10/14
	JMC-171-02-04	ASTM D6163/D4798	03/03/14
	JMC-171-02-07	ASTM D6164/D4798	02/24/14
	JMC-171-02-11	ASTM D6164	03/14/14
	JMC-222-02-01	TAS 114 (J)	03/12/15
	JMC-222-02-02	TAS 114 (J)	04/22/15
	JMC-222-02-04	TAS 114 (J)	08/14/15

APPROVED ASSEMBLIES

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Concrete

System Type A: All layer of insulation adhered. Membrane is subsequently fully or partially adhered.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI		
Minimum 1.5 thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DuraBoard		
Minimum ½" thick	**N/A**	**N/A**
Fesco Board		
Minimum ¾" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 Please refer to Roofing Application Standard RAs 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One ply of GlasBase, GlasBase Ventsulation, PermaPly 28, DynaBase, DynaBase XT or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaMax S, GlasBase Plus, PermaPly 28, GlasPly Premier, GlasPly IV, DynaFast 180 S, DynaLastic 180 S, DynaLastic 250 S or DynaPly T1 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Membrane:	One ply of DynaClad, DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250 FR, DynaLastic 250 FR CR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded Or (Only with a modified Base or Ply sheet) GlasKap or GlasKap CR Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively. 2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-120 psf. (See General Limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood / Steel / Concrete

System Type B: Base layers of insulation mechanically fastened, top layer fully adhered with approved asphalt.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 1.3" thick	**1 with 2**	**1:4 ft²**
Fesco Foam, DuraFoam		
Minimum 1.5" thick	**1 with 2**	**1:4 ft²**
Fesco Board, DuraBoard		
Minimum 1" thick	**1 with 2**	**1:4 ft²**
Retro-Fit Board		
Minimum ½" thick	**1 with 2**	**1:4 ft²**

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

One or more layers of any of the following insulations:

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Fesco Foam, DuraFoam		
Minimum 1.5" thick	**N/A**	**N/A**
Fesco Board, DuraBoard		
Minimum ¾" thick	**N/A**	**N/A**
Retro-Fit Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet:	(Optional) One ply of PermaPly 28, DynaBase, DynaBase XT or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet:	One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaMax S, GlasBase Plus, PermaPly 28, GlasPly Premier, GlasPly IV, DynaLastic 180 S, DynaFast 180 S, or DynaPly T1 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.
Membrane:	One ply of DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250 FR DynaLastic 250 FR CR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR , DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded Or (Only with a modified Base or Ply sheet) GlasKap or GlasKap CR Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively. 2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood / Steel / Concrete

System Type C(1): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.3" thick	**N/A**	**N/A**
Fesco Foam, DuraFoam Minimum 1.5" thick	**N/A**	**N/A**
Fesco Board, DuraBoard Minimum ¾" thick	**N/A**	**N/A**
Retro-Fit Board Minimum ½" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, , ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI, Fesco Foam, DuraFoam Minimum 1.5" thick	**1**	**1:4 ft²**
Fesco Board, DuraBoard Minimum ¾" thick	**1**	**1:4 ft²**
Retro-Fit Board Minimum ½" thick	**1**	**1:4 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) One ply of PermaPly 28, DynaBase, DynaBase XT or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet:	One or more plies of DynaBase, DynaBase PR, DynaBase XT, DynaMax S, GlasBase Plus, PermaPly 28, GlasPly Premier, GlasPly IV, DynaLastic 180S, DynaFast 180 S, DynaLastic 250 S or DynaPly T1 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.
Membrane:	One ply of DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250 FR, DynaLastic 250 FR CR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded Or (Only with a modified Base or Ply sheet) GlasKap or GlasKap CR Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively. 2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel / Concrete

System Type C(2): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.3" thick	**N/A**	**N/A**
Fesco Foam, DuraFoam Minimum 1.5" thick	**N/A**	**N/A**
Fesco Board, DuraBoard Minimum ¾" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Fesco Foam, DuraFoam Minimum 1.5" thick	**1 or 6 with 2**	**1:2 ft²**
Fesco Board, DuraBoard Minimum ¾" thick	**1 or 6 with 2**	**1:2 ft²**
Retro-Fit Board, DuraBoard Minimum ½" thick	**1 or 6 with 2**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) One ply of PermaPly 28, DynaBase, DynaBase XT, GlasBase, or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet:	(Optional) One or more plies of GlasPly Premier, GlasPly IV, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase PR, DynaBase XT, DynaMax S or DynaPly T1 adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.
Membrane:	One or more plies of DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250 FR, DynaLastic 250 FR CR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded. Or (Only with a modified Base or Ply sheet) GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively. 2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-45 psf. (See general limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Concrete

System Type C(3): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DuraBoard Minimum ¾" thick	**1 with 2**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of DynaWeld Base heat welded.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: 18-22 ga. steel, ASTM A653 Grade 80 steel deck placed over 0.25 in. thick structural steel supports spaced max. 6 ft o.c. attached with Buildex Traxx/4 or Traxx/5 fasteners spaced max. 6 in. o.c. at the supports. Side laps are secured with Buildex Traxx/1 fasteners spaced max. 30 in o.c

System Type C(4): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DuraBoard Minimum ¾" thick	**1 with 2**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of DynaWeld Base heat welded.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with All Purpose Fasteners in accordance with TAS 105. The minimum thickness of the existing roof shall be 2". This thickness shall be measured from the top rib of the steel deck.

System Type C(5): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, , ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI , ENRGY 3 FR, ENRGY 3 FR 25 PSI, Fesco Foam, DuraFoam		
Minimum 0.5" thick	**N/A**	**N/A**
Fesco Board, DuraBoard		
Minimum ¾" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**11 with 2**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional if Ply Sheet used) One ply of PermaPly 28, DynaBase, DynaBase XT, GlasBase, or GlasBase Plus adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq.

Ply Sheet: (Optional if Base Sheet used) One or more plies of GlasPly Premier, GlasPly IV, DynaLastic 180 S, DynaFast 180 S, DynaLastic 250 S, DynaBase, DynaBase PR, DynaBase XT or DynaPly T1 adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive or MBR Cold Application Adhesive at an application rate of 1.5 gal./sq. or one ply DynaWeld Base, DynaBase HW, DynaWeld 180 S, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Membrane:	One or more plies of DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250 FR, DynaLastic 250 FR CR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive or MBR Cold Application Adhesive at an application rate of 1.5 gal./sq. or one ply DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded. Or (Only with a modified Base or Ply sheet) GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Optional) Install one of the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively. 2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Maximum Design Pressure:	-75 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga. Steel - *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 421 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(1): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 2" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S, DynaFast 180 HW or DynaFast 250 HW fastened to the deck through the insulation as described below:

Fastening: Fasten base sheet with High Load fasteners and APB Plates or High Load Plates at a minimum 4" side lap at 18" o.c. Side laps are heat welded.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Cap Sheet: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -45 psf. (See general limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga. Steel - *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 421 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(2): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 2" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S fastened to the deck through the insulation as described below:

Fastening: Fasten base sheet with High Load fasteners and APB Plates or High Load Plates at a minimum 4" side lap at 18" o.c. Side laps are heat welded.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180S, DynaLastic 250 S or DynaPly T1adhered to the base sheet with MBR Low VOC Membrane Adhesive applied at an application rate of 2 – 2.5 gal/sq. or MBR Cold Application Adhesive applied at an application rate of 1.5 – 2.0 gal/sq., or with approved mopping asphalt at an application rate of 20-40 lbs./sq.
Or,
One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Cap Sheet: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR fully adhered with MBR Low VOC Membrane Adhesive adhered at an application rate of 2 – 2.5 gal/sq., or
MBR Cold Application Adhesive adhered at an application rate of 1.5 – 2 gal/sq. or with approved mopping asphalt at an application rate of 20-40 lbs./sq.
Or,
One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -45 psf. (See general limitation #9).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 309 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(3): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S fastened to the deck through the insulation as described below:

Fastening: Fasten base sheet with High Load fasteners and High Load Plates at a minimum 4" side lap at 6" o.c. Side laps are heat welded.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Cap Sheet: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -105 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 311 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(4): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and JM APB Plate or High Load Plate spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 105 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 311 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(5): All layers of insulation simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S fastened to the deck through the insulation as described below:

Fastening: Fasten base sheet with High Load fasteners and APB Plates or High Load Plates at a minimum 4" side lap at 6" o.c. Side laps are heat welded.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -105 psf. (See general limitation #7).

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 488 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(6): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply ofDynaFast 250 HW mechanically fastened through the optional insulation with High Load Fastener and High Load Plate spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 250 HW a heat welded while maintaining 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 165 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 398 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(7): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load Fastener and High Load Plate spaced 12" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 67.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 398 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(8): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the optional insulation with High Load Fastener and High Load Plate spaced 12" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 67.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 533 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(9): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load LH Fastener and Polymer Membrane Batten or High Load Fastener and Deep well Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows 71" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 533 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(10): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the optional insulation with High Load LH Fastener and Polymer Membrane Batten or High Load Fastener and Deep well Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows 71" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 422 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(11): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with High Load Fastener and High Load Platespaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 142.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 307 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(12): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and High Load Plate spaced 6" o.c. in every other lap of the minimum 4" torch welded side laps in rows 70" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Steel deck with supports at a maximum 6ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 307 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(13): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fastener and High Load Plate spaced 6" o.c. in every other lap of the minimum 4" torch welded side laps in rows 70" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: - 52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 244 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(14): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the insulation with High Load LH and Polymer Membrane Batten or High Load Fastener and Deep well Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 244 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(15): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load LH Fastener and Polymer Membrane Batten or High Load Fastener and Deep well Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 265 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(16): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fasteners & APB Plates orHigh Load Plates spaced 9" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Wood deck with supports at a maximum 24" o.c. and secured with #8 wood screws with a maximum 6" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 265 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(17): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fasteners & APB Plates, or High Load Plates spaced 9" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One ply of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Cementitious Wood Fiber attached 8" o.c. with ¼"-14 PH screws and 2" diameter metal plates to structural supports at a maximum 32" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 131 lbf when tested with Twin-Loc Nails in accordance with TAS 105.

System Type E(1): Base sheet mechanically fastened with optional insulation.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened through the optional insulation with Twin-Loc Nails and Straight Line Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps and 6" o.c. in one intermediate row in the center of the sheet for maximum row spacing of 17.5".

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One or more plies of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Cementitious Wood Fiber attached 8” o.c. with ¼”-14 PH screws and 2” diameter metal plates to structural supports at a maximum 32” o.c.*The deck should record a Minimum Characteristic Resistance Force (MCRF) of 131 lbf when tested with Twin-Loc Nails in accordance with TAS 105.

System Type E(2): Base sheet mechanically fastened with optional insulation.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the optional insulation with Twin-Loc Nail and JM Straight Line Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps and 6” o.c. in one intermediate row in the center of the sheet for maximum row spacing of 17.5”.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One or more plies of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4” side laps and 6” end laps.

Maximum Design Pressure: -90 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5 ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 52 lbf when tested with JM LWC CR Base Fasteners in accordance with TAS 105.

System Type E(3): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaWeld Base fastened to the deck as described below:

Fastening: Fasten base sheet with JM LWC CR Base Fastener at the minimum 4" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaBase HW, DynaWeld 180 S, DynaWeld Base, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5 ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 45 lbf when tested with JM LWC CR Base Fasteners in accordance with TAS 105.

System Type E(4): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaWeld Base fastened to the deck as described below:

Fastening: Fasten base sheet with JM LWC CR Base Fasteners at the minimum 4" side lap 7" o.c. and 7" o.c. in three staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaBase HW, DynaWeld 180 S, DynaWeld Base, DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded.

Membrane: One ply of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 178 lbf when tested with Twin-Loc Nail in accordance with TAS 105.

System Type E(5): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened with Twin-Loc Nail and Straight Line Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One or more plies of DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 250, DynaWeld Cap 250 FR or DynaWeld Cap 250 FR CR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 178 lbf when tested with Twin-Loc Nail in accordance with TAS 105.

System Type E(6): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 S mechanically fastened with Twin-Loc Nail and Staight Line Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: (Optional) One or more plies of DynaFast 180 S, DynaPly T1 or DynaLastic 250 S adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One or more plies of DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR adhered in MBR Cold Application Adhesive at a rate of 1.5-2 gal./sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4” side laps and 6” end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 44.2 lbf when tested with JM LWC CR Base Fasteners in accordance with TAS 105.

System Type E(7): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of PermaPly 28 mechanically fastened with JM LWC CR Base Fastener spaced 6" o.c. in the center of the minimum 4" side laps and 6” in three staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: One ply of DynaBase, DynaBase PR, DynaPly T1, DynaBase XT, DynaFast 180 S, DynaLastic 180 S or DynaLastic 250 S fully adhered in MBR Cold Application Adhesive at an application rate of 1.5 – 2.0 gal/sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR fully adhered in MBR Cold Application Adhesive at an application rate of 1.5 – 2.0 gal/sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4” side laps and 6” end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight Concrete with structural supports a maximum 5ft. o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 66.3 lbf when tested with JM LWC CR Base Fasteners in accordance with TAS 105.

System Type E(8): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of PermaPly 28 mechanically fastened with JM LWC CR Base Fastener spaced 9" o.c. in the center of the minimum 4" side laps and 9” in three staggered rows in the center of the sheet.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet: One ply of DynaBase, DynaBase PR, DynaPly T1, DynaBase XT, DynaFast 180 S, DynaLastic 180 S or DynaLastic 250 S fully adhered in MBR Cold Application Adhesive at an application rate of 1.5 – 2.0 gal/sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq.

Membrane: One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR or DynaLastic 250 FR CR fully adhered in MBR Cold Application Adhesive at an application rate of 1.5 – 2.0 gal/sq. or approved asphalt with the EVT range at a rate of 20-40 lbs./sq. while maintaining 4” side laps and 6” end laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight concrete with structual supports a maximum 5-ft o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 155 lbf when tested with 1.8" Twin Loc-Nails in accordance with TAS 105.

System Type E(9): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: (Option 1): One ply of DynaFast 180 HW or DynaFast 250 HW installed with Trufast Straight Line Batten Bar and 1.8" Twin Loc-Nails fastened 6" o.c. within the torch adhered 4" side laps.
(Option 2*)*: One ply of DynaFast 180 S Trufast Straight Line Batten Bar and 1.8" Twin Loc-Nails fastened 6" o.c. within the torch adhered 4" side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet Optional: (Option 1) One or more plies of DynaFast 180 HW, DynaFast 250 HW, or DynaWeld 250 S torch adhered.
(Option 2 – only over DynaFast 180 S) One or more plies of DynaFast 180 S, DynaPly T1, DynaLastic 180 S, or DynaLastic 250 S, fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

Membrane: (Option 1) One or more plies of DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR torch adhered.
(Option 2 – only over Base Sheet Option 2 or Ply Sheet Option 2) One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR, DynaGlas FR CR, DynaLastic 180, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Lightweight concrete over 22 ga. steel deck with structual supports a maximum 5-ft o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 289 lbf when tested with High Load fasteners in accordance with TAS 105.

System Type E(10): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: (Option 1): One ply of DynaFast 180 HW or DynaFast 250 HW installed with High Load fasteners and High Load Plates fastened 6" o.c. within the torch adhered 4" side laps.
(Option 2*)*: One ply of High Load fasteners and High Load Plates fastened 6" o.c. within the torch adhered 4" side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet Optional: (Option 1) One or more plies of DynaFast 180 HW, DynaFast 250 HW, or DynaWeld 250 S torch adhered.
(Option 2 – only over DynaFast 180 S) DynaFast 180 S, DynaPly T1, DynaLastic 180 S, or DynaLastic 250 S, fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.

Membrane: (Option 1) DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld Cap 250, DynaWeld Cap 250 FR, DynaWeld Cap 250 FR CR torch adhered with 3-inch side laps.
(Option 2 – only over Base Sheet Option 2 or Ply Sheet Option 2) DynaGlas 30 FR, DynaGlas, DynaGlas FR, DynaGlas FR CR, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR fully adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal. with 3-inch side laps.

Maximum Design Pressure: -97.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7: Recover, Non-insulated
Deck Description: Lightweight concrete with structual supports a maximum 5-ft o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 344 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type E(11): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, DynaFast 180 S, or DynaFast 250 HW mechanically fastened with High Load Fasteners and High Load Plates spaced 12" o.c. in the center of the minimum 5" heat welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet Optional: (Option 1- only over DynaFast 180 S**)** One or more plies of DynaFast 180 S, DynaPly T1, or DynaLastic 250 S adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2 / gal.
(Option 2 – only over DynaBase) One or more plies of DynaFast 180 HW, DynaWeld 250 S, or DynaFast 180 HW torch adhered.

Membrane: (Option 1 – not over DynaFast 180 HW or 250 HW) One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR, DynaLastic FR CR with 4” side laps adhered in JM MBR Cold Application Adhesive applied at a rate of 50 – 70 ft^2/ gal.
(Option 2 - not over DynaFast 180 HW or 250 HW) One or more plies of DynaGlas 30 FR, DynaGlas, DynaGlas FR CR, DynaGlas FR, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 FR CR, DynaGlas FR XT, DynaKap FR T1, DynaMax FR, DynaLastic 250 FR, DynaLastic FR CR with 4” side laps adhered in ASTM D 312, Type IV asphalt applied at a rate of 20 – 40 lbs./sq.
(Option 3) One or more plies of DynaWeld Cap, DynaWeld Cap FR, DynaWeld Cap FR CR, DynaWeld Cap 180 FR, DynaWeld Cap 180 FR CR, DynaWeld Cap 250, DynaWeld Cap 250 FR, or DynaWeld Cap FR CR with 4” side laps torch adhered.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover

Deck Description: Concrete

System Type F: Base sheet adhered with approved asphalt.

Base Sheet: One ply of PermaPly 28, DynaBase, DynaBase XT, GlasBase Plus, DynaPly T1 or Ventsulation adhered to the existing roof deck in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq.

Ply Sheet: (Optional) One or more plies of DynaBase, DynaBase PR, DynaBase XT, GlasBase Plus, PermaPly 28, GlasPly Premier, GlasPly IV, DynaLastic 180S, DynaLastic 250 S or DynaPly T1 adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq.

Membrane: One ply of DynaKap T1, DynaKap FR T1, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250FR or DynaPly T1 adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or with MBR Bonding Adhesive at an application rate of 1.5 gal./sq.
Or
(Only with a modified Base or Ply sheet) GlasKap or GlasKap CR Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

2. GlasKap or GlasKap CR adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Maximum Design Pressure: -275 psf. (See General Limitation #9)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE